

## ABSTRACT

When a transmitter device connected to a network system outputs a digital signal subjected to bi-phase modulation, a 5 complicated detection circuit for detecting a digital signal is required on the receiver side. Therefore, in an interface device (4) which intervenes between the transmitter device and a communication path (6), transmission data S subjected to bi-phase modulation is converted into a transmission signal subjected to 10 amplitude shift modulation, and the resultant transmission signal is output to the communication path (6). The interface device (4) converts the transmission data S into an NRZ modulated digital signal in the modulation method conversion circuit (12). The amplitude modulation circuit (14) modulates the amplitudes of a 15 carrier wave according to the NRZ signal to thereby generate a transmission signal. In the interface device (4) on the receiver side, a detection circuit (22) detects a transmission signal to extract an NRZ modulated digital signal. A modulation method reverse conversion circuit (24) converts the NRZ signal into a 20 bi-phase signal before outputting to the receiver device.